



Yanco Solar Farm

State Significant Development Assessment

SSD 9515

July 2020



Published by the NSW Department of Planning, Industry and Environment

dpie.nsw.gov.au

Title: Yanco Solar Farm

Subtitle: State Significant Development Assessment

Cover image: Solar panels. Source: Department of Planning, Industry and Environment Image Database (<https://images.planning.nsw.gov.au>).

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Executive Summary

ib vogt GmbH (ib vogt) proposes to develop a new 60 megawatt (MW) solar farm with 81 MW/57 MW-hour (MWh) of battery storage located approximately two kilometres (km) southwest of Leeton in the Riverina Murray region of NSW (see Figure E-1).



Figure E-1 | Location of the Project

Engagement

The Department exhibited the Environmental Impact Statement for the project and received 9 submissions from the public and advice from 11 government agencies. Of the public submissions, two were from special interest groups (one support and one comment) and seven were from the public (five objections and two support). The key issues raised in public submissions included land use compatibility, decommissioning and visual impacts.

None of the government agencies objected to the project, although Department of Primary Industries (DPI) - Agriculture expressed concern that the solar farm was proposed on irrigated cropping land which it considered was a scarce and valuable resource in NSW.

The Department also consulted with Leeton Shire Council and the relevant government agencies on key issues and inspected the site on 9 and 26 September 2019 and visited surrounding landowners. Most agencies (except Council and DPI - Agriculture), raised similar concerns to those raised on other solar farm projects.

Leeton Shire Council initially objected to the project, expressing similar concerns to DPI – Agriculture about the loss of prime agricultural land in an area with highly developed services and irrigation infrastructure.

Following further consultation with ib vogt, Council conditionally supported the project in the context of changed economic circumstances in the region, only if the development consent limited operation of

the project to 30 years and ib vogt enters into a voluntary planning agreement with Council including contributions and rehabilitation of the land at the end of 30 years.

In response to agency advice and submissions on the project, ib vogt amended the project including reduction of the development footprint by approximately 31 ha to allow the majority of this area to continue to be used for agriculture, increasing the separation distances from 30 m to 160 m from the closest residence (R7), from 110 m to 650 m for residence R2 and from 130 m to 650 m for R3, increasing the width of landscaping in front of the nearest residences (R4 and R5) and relocating the site access point off Research Road.

ib vogt has also reached agreement with Council in regard to the duration of the consent and the terms of a voluntary planning agreement, and these matters have been incorporated in the Department's recommended conditions of consent.

Assessment

The Department has undertaken a comprehensive assessment of the merits of the project including the mandatory considerations under Section 4.15 of the *Environmental Planning and Assessment Act 1979*. The Department has also considered the full range of potential impacts associated with the project. The key assessment issue identified for the project is land use compatibility, including use of irrigated agricultural land.

The project site (180 ha) with the development footprint of 152 ha is located on irrigated agricultural land within the Murrumbidgee Irrigation Area (MIA). The soils within the site are mostly (97 %) Class 3 under the *Land and Soil Capability Mapping in NSW* (OEH, 2017), meaning that the land is suited to grazing, but capable of sustaining cultivation on a rotational basis with the remainder soils being Class 6 and do not include any mapped Biophysical Strategic Agricultural Land (BSAL). The site is currently used for irrigated agriculture (growing grapevines and orange groves).

The Department recognises the importance of agricultural production on irrigated land in the region and the concerns expressed by the community, DPI – Agriculture and initially by Council.

The Department's detailed assessment has concluded that the project would not fragment or alienate resource lands in the local government area, as the land could be easily returned to agricultural land following decommissioning and the inherent agricultural capability of the land would not be affected by the project due to the relatively low scale of the development. Further, the Department notes that ib vogt has committed to not impacting Murrumbidgee Irrigation infrastructure and continuing to pay the water entitlement charges attached to the site.

In addition, the loss of 152 ha of irrigated agricultural land combined with two the other approved SSD solar farms in the MIA (Griffith Solar Farm and Riverina Solar Farm) would result in 390 ha, which represents a small fraction (i.e. 0.43 %) of irrigated land within the MIA. In this regard, the Murrumbidgee Irrigation Authority has not raised any concerns about the impacts of the project on the irrigation scheme.

Overall, the Department considers that the project would not significantly reduce the overall agricultural productivity of the region and is satisfied that the site could be returned to agricultural uses with the recommended conditions to rehabilitate the land following decommissioning including removing solar farm infrastructure and to restore the land to at least Class 3 land capability.

In addition, although the exact value of the agricultural production from the site was not agreed between ib vogt and Council (estimated to range between \$213 million and \$352 million), the economic benefit

of the change in land use from irrigated agriculture and to a solar farm over the expected operational life of the solar farm including electricity generation (estimated at around \$870 million) would be greater and more than double that of agricultural production. There would also be both direct and indirect benefits to the local community generated by the project during construction.

However, to address Council's concerns about long term impacts on agricultural productivity, the Department has recommended a condition limiting the operation of the solar farm to 30 years. The condition allows the operation of the project to be extend beyond 30 years with the agreement of the Secretary following consultation with Council in regard to the land use planning objectives applicable to the site at the time. Both ib vogt and Council have accepted this approach.

The Department acknowledges that ib vogt has amended the project and made commitments to address concerns raised by Council and submitters including setting back part of the solar arrays to reduce visual impacts and offering to enter into a planning agreement with Council, which would provide approximately \$900,000 for community enhancement projects in the local area.

Existing vegetation, the relatively low height of the infrastructure and the proposed vegetation buffer along most of the project boundaries would limit the visual impacts of the project from surrounding residences and most viewpoints within 2 km including the subdivided lots in Leeton north-east of the project site.

The project has been designed to largely avoid impacts on biodiversity, Aboriginal heritage and water, including irrigation channels running through the site. The unavoidable impacts to vegetation, including clearing 0.54 ha of native vegetation would be offset in accordance with the *Biodiversity Conservation Act 2016*. The layout of the solar farm has also been designed to avoid impacts on Aboriginal heritage.

The potential traffic impacts would be relatively short-term, minor in nature and can be managed in accordance with Government policy. The site access route has been designed in consultation with Council and Transport for New South Wales (TfNSW). The Department has recommended strict conditions requiring a Traffic Management Plan. The transmission line connecting the project to TransGrid's substation would cross a non-operational rail corridor owned by TfNSW. ib vogt proposed to enter into a licence agreement with TfNSW for any works within the rail corridor. TfNSW confirmed that it has no outstanding issues.

To address the residual impacts of the project, the Department has recommended a range of detailed conditions, developed in conjunction with agencies and Council, to ensure these impacts are effectively minimised, managed and/or offset.

Summary

Overall, the Department considers the site to be appropriate for the project as it has good solar resources and available capacity on the existing electricity network and is consistent with the NSW Government's *Large-Scale Solar Energy Guideline* and the *Riverina Murray Regional Plan*.

The project is also consistent with NSW's *Climate Change Policy Framework* and the *Net Zero Plan Stage 1: 2020 – 2030* as it would contribute 60 MW of renewable energy to the National Electricity Market, including a battery storage facility with a capacity of 81 MW / 57 MWh.

Importantly, the battery facility would enable the project to store solar energy for dispatch to the grid outside of daylight hours and /or during periods of peak demand, which has the potential to increase grid stability and energy security.

The project would also provide flow-on benefits to the local community, including up to 120 construction jobs and a capital investment of about \$99 million. ib vogt would also be required to contribute \$900,000 for local community enhancement projects.

On balance, the Department considers that the benefits of the project to the State of NSW and the local community could be delivered without any significant environmental or social impacts and is therefore in the public interest, and should be approved subject to strict conditions.

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1 Project

ib vogt GmbH (ib vogt) proposes to develop a new State significant solar farm approximately 2 kilometres (km) west of Yanco and southwest of Leeton, in the Leeton Shire local government area (LGA) (see **Figure 1** and **2**).



Figure 1 | Regional Context

The project involves the construction of a new solar farm with a generating capacity of approximately 60 megawatts (MW) and 81 MW/57 MW-hour (MWh) of battery storage. It also involves the upgrading and decommissioning of infrastructure and equipment over time. While the capacity of the project may increase over time as technology improves, the footprint of the development would not be permitted to increase without further planning approval.

The solar farm would connect to the existing TransGrid Yanco substation located approximately 1 km southeast of the site via a new overhead or underground 33 kilovolt (kV) transmission line (approximately 1.4 km long) running parallel to Houghton Road in the road reserve and the non-operational Junee to Hay rail corridor.

The key components of the project are summarised in **Table 1**, shown in **Figure 3**, and described in the Environmental Impact Statement (EIS) (see **Appendix B**), amended development applications and Submissions Report (see **Appendix D**).

The site is located on irrigated agricultural land within the Murrumbidgee Irrigation Area (MIA).

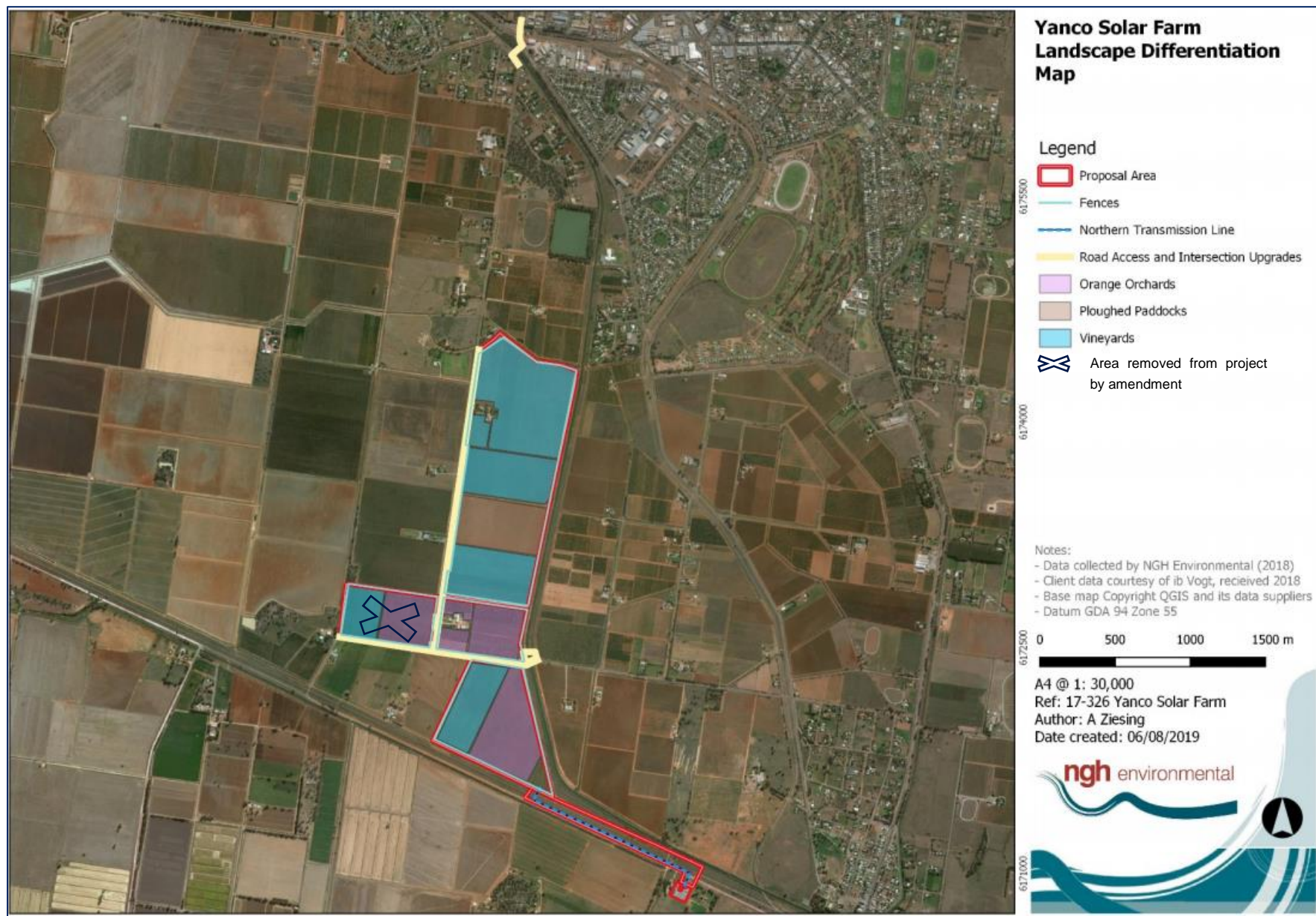


Figure 2 | Current Land Use

Table 1 | Main Components of the Project

Aspect	Description
Project summary	<p>The project includes:</p> <ul style="list-style-type: none"> • a generating capacity of approximately 60 MW; • approximately 170,000 single-axis tracking solar panels (up to 2.2 m high) and 14 inverter stations (3 m high); • 14 lithium-ion battery storage units (up to 3 m high) spread throughout the site (with a total capacity 81 MW/57 MWh); • an internal switching station (control room and switchgear) (up to 5 m high) and a 1.4 km overhead or underground 33 kV transmission line along Houghton Road to connect to TransGrid's substation; • internal access tracks, staff amenities, maintenance and storage buildings (up to 6 m high), offices, laydown areas, construction compounds, car park and security fencing (up to 2 m high); • vegetation screening along site boundaries (as shown in Figure 3); and • subdivision of land within the site for the grid connection.
Project area	180 ha (development footprint is around 152 ha)
Access route	The site would be accessed via Irrigation Way, McQuillan Road, Racecourse Road, Poplar Avenue and Canal Street, Whitton Road, Toorak Road and Research Road.
Site entry and road upgrades	<p>Site entry would be via three access points:</p> <ul style="list-style-type: none"> • two off Toorak Road (one to access northern portion and one to access central portion of the development footprint); and • one off Research Road to access southern portion of the footprint. <p>The existing access points off Toorak Road and Research Road would be upgraded to a rural property access.</p>
Construction	<ul style="list-style-type: none"> • The construction period would last for up to 10 months. • Construction hours would be limited to Monday to Friday 7 am to 6 pm, and Saturday 8 am to 1 pm.
Operation	<ul style="list-style-type: none"> • The expected operational life of the infrastructure is approximately 30 years.
Hours of operation	<ul style="list-style-type: none"> • Daily operations and maintenance would be undertaken Monday to Friday 7 am to 6 pm, and on Saturday 8 am to 1 pm.
Decommissioning and rehabilitation	<ul style="list-style-type: none"> • The project also includes decommissioning at the end of the project life, which would involve removing all infrastructure.
Subdivision	<ul style="list-style-type: none"> • Subdivision of the lot on which the proposed internal switching station would be located.
Employment	<ul style="list-style-type: none"> • Up to 120 construction jobs and 3 operational jobs.
Capital investment value	<ul style="list-style-type: none"> • \$99 million

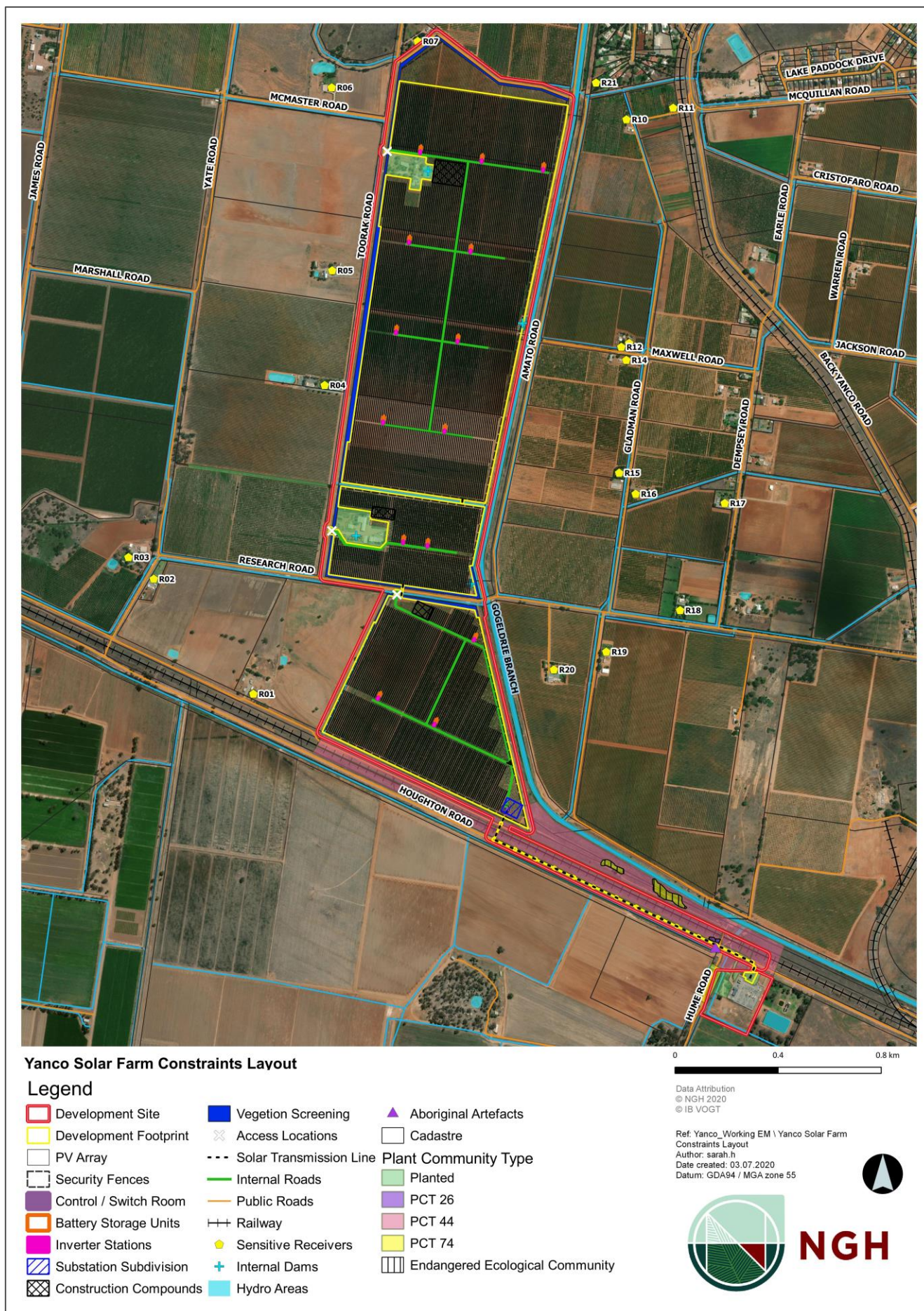


Figure 3 | Project Layout

2 Strategic context

2.1 Site and Surrounds

The project is located on a 180 hectare (ha) site in the Riverina Murray region of NSW. The site is zoned RU1 – Primary Production under the *Leeton Shire Local Environmental Plan 2014* (Leeton LEP) and is currently an active agricultural enterprise used for irrigated cropping of grapevines for wine production (99 ha or 65 % of the development footprint) and orange orchards (43 ha or 28 % of the development footprint). Approximately 10.5 ha of land is currently vacant but has previously been used for grapevines (refer to **Figure 2**). Areas of remnant native vegetation exist primarily along fence lines and road reserves.

The soils within the site are predominantly classified as Class 3 (97 % of the land) under the *Land and Soil Capability Mapping in NSW* (OEH, 2017), with the remainder of the land being Class 6 (refer to **Figure 4**). As such, the land is considered suitable for agriculture on a rotational basis with some limitations that are widely available and can be readily implemented. The site is not mapped as Biophysical Strategic Agricultural Land (BSAL).

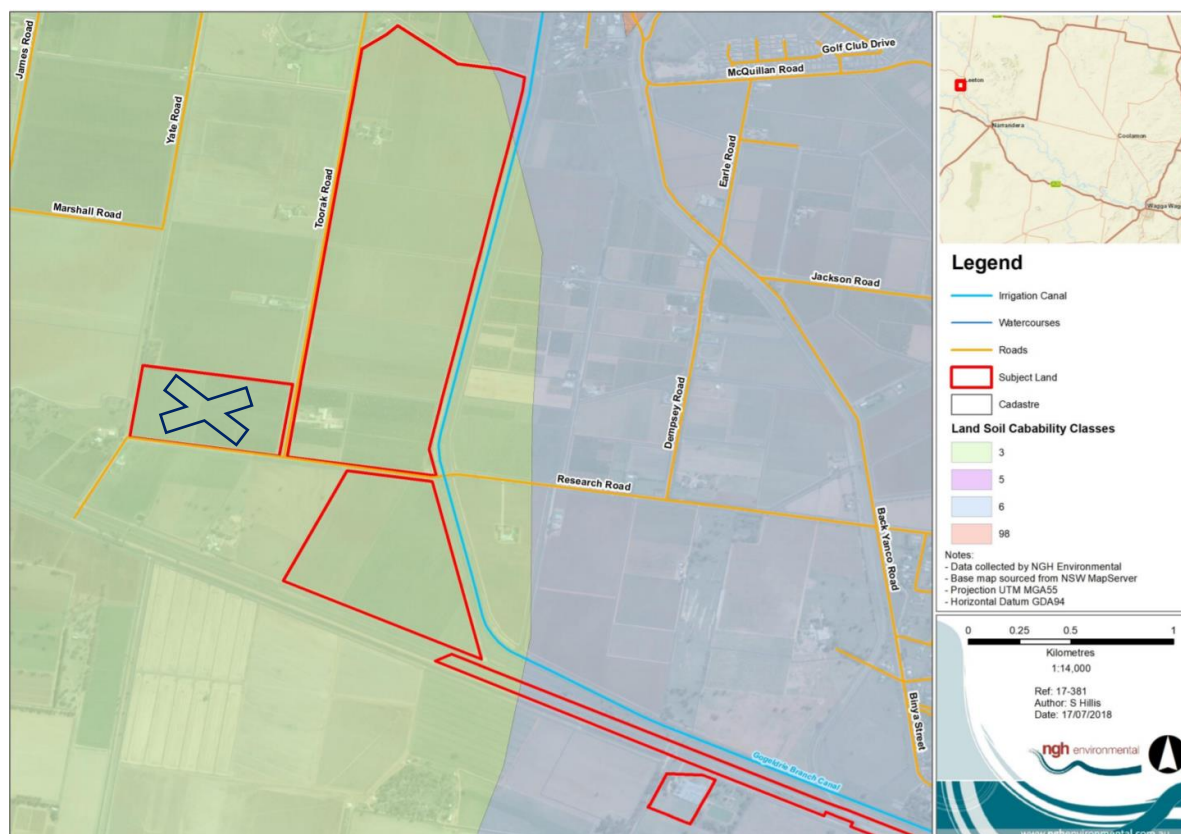


Figure 4 | Land and Soil Capability Classes within the Project Site

The project is also located in the Murrumbidgee Irrigation Area (MIA). The MIA is a highly productive agricultural region in Australia with an area of 379,000 ha and an area of irrigated land of 90,000 ha. The Department notes that in December 2018, the MIA area (refer to **Figure 5**) was reduced from 680,500 ha to 379,000 ha following the removal of an area of 300,000 ha to Gunbar Water also resulting in a reduction of irrigated land under its control from 140,000 ha to 90,000 ha¹.

¹Murrumbidgee Irrigation Limited 2019 Annual Report, p 2-3. Both Council and ib vogt documentation reference the original MIA area but for clarity this report references the current area of operation.

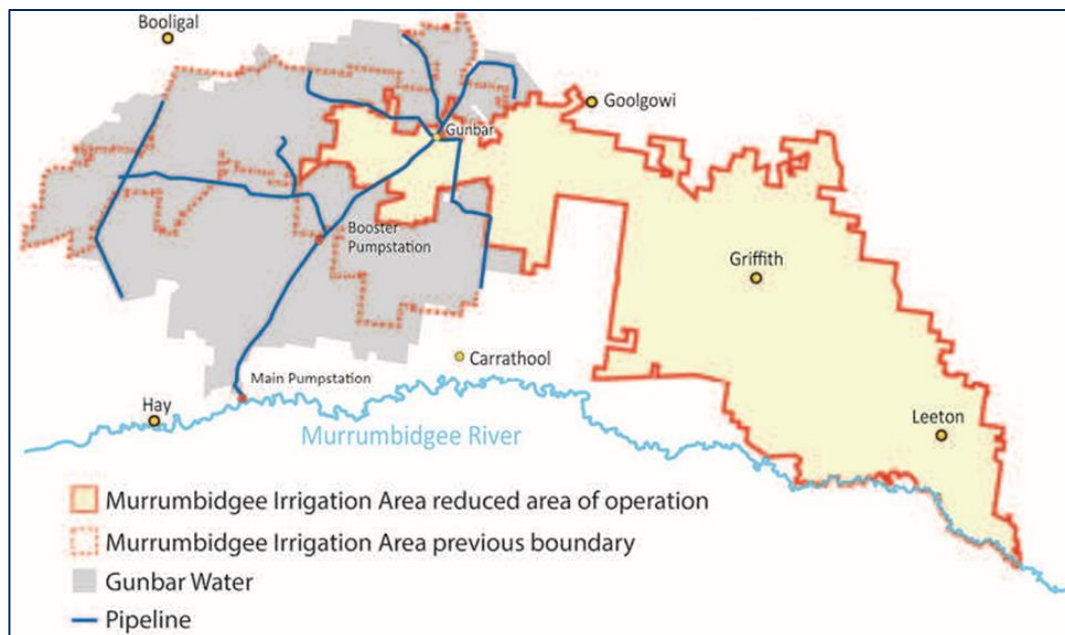


Figure 5 | MI Area of Operation (Source: MI Annual Report 2019)

The Gogeldrie Branch Canal borders the site to the east. The Gogeldrie Branch Canal diverts off the Main Canal at the Yanco Regulator (i.e. major system split), and runs through the western side of Yanco and Leeton. Several smaller irrigation canals and four farm dams are located within the project site and are used for current agricultural activities.

The proposed development footprint is 152 ha and has been designed to avoid impacts on biodiversity, Aboriginal heritage and water, including irrigation channels running through the site.

The majority of the native vegetation within the site has been cleared. Native vegetation primarily occurs along the road reserves and fence lines. Remnant native vegetation in the form of paddock trees, small mixed stands of remnant native woodlands and native grassland are present within the proposed transmission line route.

Toorak Road and Research Road dissect the site with smaller laneways surrounding the site. Houghton Road and the Junee to Hay railway (non-operational) border the southern boundary of the project site. TransGrid's Yanco substation is located approximately 1 km southeast of the site. The project would connect to this substation via a new 33 kV transmission line that crosses the railway line and runs along Houghton Road.

The majority of land surrounding the site is zoned RU1 Primary Production and is used for agricultural purposes, primarily cropping. A portion of the surrounding area to the northeast of the site is zoned R2 (Low Density Residential) and is about 230 m away at its closest point from the development footprint and includes a residential subdivision.

There are 23 non-associated residences adjacent to the site and 1.6 km within the site, with three residences (R4, R5 and R7) located 110 m, 140 m and 160 m from the development footprint respectively. There are a further around 250 residences located within 1 km of the site, mainly located in the subdivision nearby and a further 900 residences within 2 km (including Leeton township).

The existing vegetation, the relatively low height of the infrastructure and the proposed vegetation buffer along most of the project boundaries would limit the visual impacts of the project from other residences and most viewpoints within 2 km, with the exception of the residences adjacent to the site.

2.2 Other Solar Farms

The Riverina Murray region has also attracted considerable interest from solar developers given the proximity of major transmission lines and existing electricity substations. There are seven approved State significant development solar farms within approximately 50 km of the project site, although the nearest solar farm is 27 km from the site (see **Table 2** and **Figure 6**). The Department also notes that two of these projects (i.e. Griffith Solar Farm and Riverina Solar Farm) are also within the MIA.

While there are further 11 approved and five proposed solar farms in the broader region, they are located a significant distance from the proposed project (i.e. beyond 100 km from the site).

Table 2 | Nearby solar farms

Project	Capacity (MW)	Status	Approximate distance from the project (km)
Darlington Point Solar Farm	275	Under Construction	27
Yarrabee Solar Farm	900	Approved	27
Griffith Solar Farm	60	Operational	37
Riverina Solar Farm	30	Approved	38
Avonlie Solar Farm	200	Approved	38
Coleambally Solar Farm	150	Operational	42
Sandigo Solar Farm	100	Approved	51

Given the distance of the Yanco Solar Farm from all approved and proposed projects in the region, including the Griffith Solar Farm and Riverina Solar Farm, and the surrounding topography, there would be no significant cumulative visual or noise impacts (the closest projects located 27 km away).

The key issues for cumulative impacts at the regional level relate to agricultural land and workforce accommodation. This is discussed further in **sections 5.1** and **5.2**.

In regard to workforce accommodation, Coleambally Solar Farm and Griffith Solar Farm are already operational projects, as such there could be no overlap in construction periods with these projects.

There is potential for construction of Yanco Solar Farm to overlap with construction of Darlington Point Solar Farm (located approximately 27 km away) which is currently under construction.

In addition, there is potential for construction of the Yanco Solar Farm to overlap with the construction of the approved Yarrabee Solar Farm, Riverina Solar Farm, Avonlie Solar Farm and Sandigo Solar Farm.

In this regard, the surrounding regional network may experience an increase in traffic numbers, however the local road surrounding the project would not experience cumulative traffic impacts, as the project would not share the use of local roads with other projects.

Workforce accommodation for these solar projects would be sourced from the local and wider region, including neighbouring towns (Leeton, Narrandera, Yanco and Griffith) and LGAs, as discussed further in **section 5.2**.

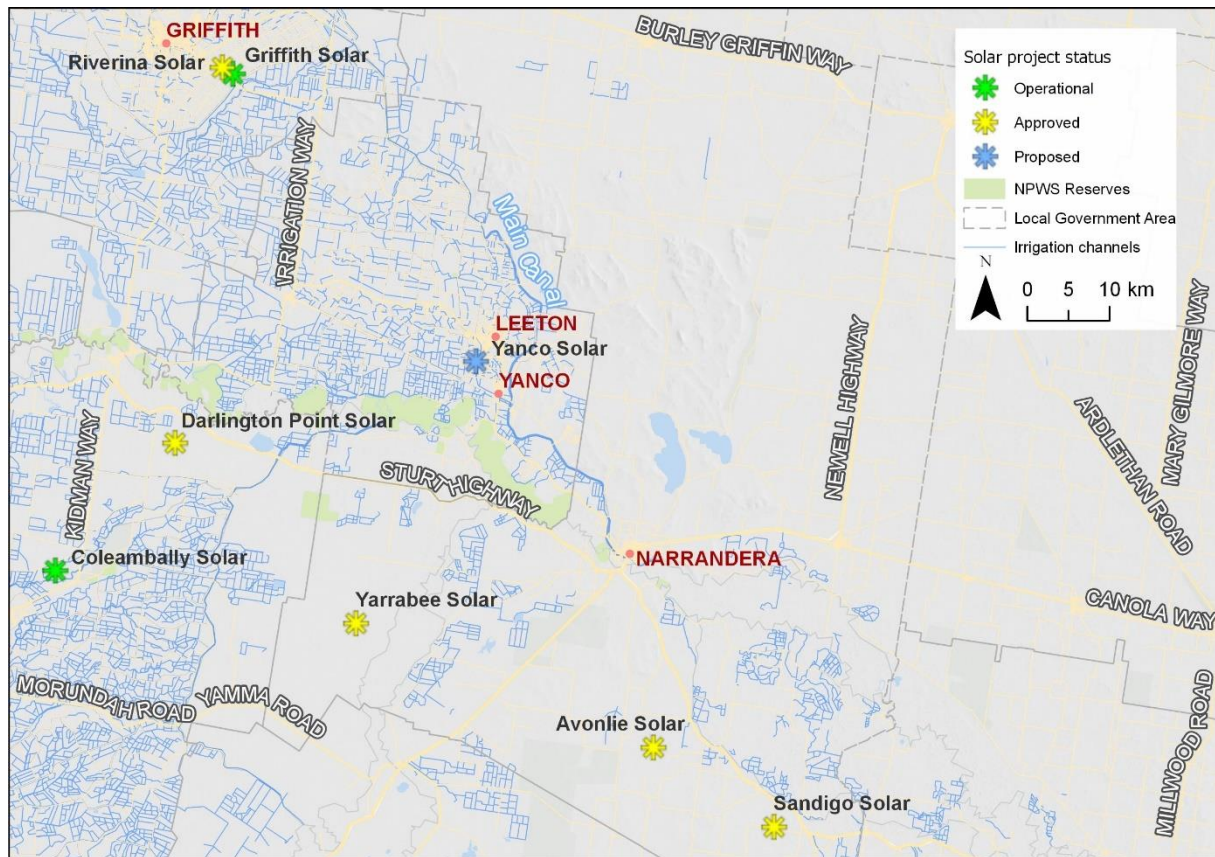


Figure 6 | Nearby Solar Farms

2.3 Energy Context

In 2019, NSW derived approximately 18.7 % of its energy from renewable sources. The rest was derived from fossil fuels, including 76.7 % from coal and 4.1 % from gas. However, there are currently no plans for the development of new coal power stations in NSW, and the development of renewable energy sources, like wind and solar farms, is experiencing rapid growth.

This is highlighted in the 2017 *Independent Review into the Future Security of the National Electricity Market* (the Finkel Review), which outlines a strategic approach to ensuring an orderly transition from traditional coal and gas fired power generation to generation with lower emissions. It notes that Australia is heading towards zero emissions in the second half of the century.

The *United Nations Framework Convention on Climate Change* has adopted the Paris Agreement, which aims to limit global warming to well below 2°C, with an aspirational goal of 1.5°C. Australia's contribution towards this target is a commitment to reduce greenhouse gas emissions by 26 % to 28 % below 2005 levels by 2030.

The *NSW Climate Change Policy Framework*, released in November 2016, sets an aspirational objective for NSW to achieve net zero emissions by 2050. The NSW Government also has the *NSW Net Zero Plan Stage 1: 2020 – 2030*, released in March 2020, which builds on the framework and sets out how the NSW Government will deliver on this objective, and fast-track emissions reduction over the next decade.

The Department released the *Large-Scale Solar Energy Guideline* (Solar Guideline) in December 2018 to provide the community, industry and regulators with guidance on the planning framework for the assessment of large-scale solar projects, and identify the key planning considerations relevant to solar energy development in NSW.

The Solar Guideline aims to support the growth of the solar industry, whilst ensuring that impacts are adequately assessed, effective stakeholder engagement is undertaken, and that attracting investment is balanced with considering the interests of the community.

The Solar Guideline highlights the importance of site selection and requires careful consideration of potential site constraints including agriculture. The Guideline requires further consideration of important agricultural lands, irrigated cropping land, and land and soil capability classes 1, 2 and 3. The EIS for this project was submitted to the Department in April 2019 following the release of the Guideline.

The Solar Guideline also acknowledges that large scale solar projects could help to reduce reliance on fossil fuels, thereby contributing to reductions in air pollution and greenhouse gas emissions, whilst also supporting regional NSW through job creation and investment in communities that may not have similar opportunities from other industries.

NSW is one of the nation's leaders in large-scale solar, with eleven major operational projects and an additional nine under construction or planned to be under construction.

In March 2018, the NSW Government identified 10 potential Energy Zones across three broad regional areas, including the New England, Central West and South West regions of NSW. The identified energy zones are aimed at encouraging *“investment in new electricity infrastructure and unlocking additional generation capacity in order to ensure secure and reliable energy in NSW”*.

The project would be located adjacent to the South West Renewable Energy Zone and would have access to the electrical grid at a location with available network capacity. With a capacity of 60 MW, and a battery storage facility with a capacity of 81 MW / 57 MWh, the project would generate enough electricity to power approximately 22,500 homes, and is therefore consistent with NSW's *Climate Change Policy Framework* and *Net Zero Plan Stage 1: 2020 – 2030*.

Importantly, the battery facility would enable the project to store solar energy for dispatch to the grid outside of daylight hours and/or during periods of peak demand, which has the potential to increase grid stability and energy security.

3 Statutory context

3.1 State Significant Development

The project is classified as State significant development under Section 4.36 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). This is because it triggers the criteria in Clause 20 of Schedule 1 of *State Environmental Planning Policy (State and Regional Development) 2011* (SRD SEPP), as it is development for the purpose of electricity generating works with a capital investment value of more than \$30 million.

Under the delegation of the Chairperson of the Commission of 12 March 2020, the Executive Director, Energy, Resources and Compliance, may determine the development application as Council advised in writing to the Department that its objection had been resolved, there were five public submissions in the nature of objections and a political donations disclosure statement has not been made by ib vogt and the application had not already been referred to the Commission.

3.2 Amended Application

In accordance with Clause 55 of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation), a development application can be amended at any time before the application is determined. Accordingly, ib vogt has sought to amend its application.

The Department considers that it can accept ib vogt's amended applications for the following reasons:

- the project amendments have reduced the impacts of the project as whole;
- the amended application directly responds to the key issues raised in submissions received by the Department during the exhibition of the original application;
- ib vogt assessed the impacts of the amended project (see **Appendices F and G**);
- the Department made the additional information available online and sent it to the relevant agencies for comment; and
- no representations have been made by the community or special interest groups opposing the amended applications.

The project amendments are summarised in **section 4.4** of this report.

3.3 Permissibility

The site is located wholly within land zoned RU1 Primary Production under the Leeton LEP, the provisions of which are discussed in **section 5.1**. The RU1 zone includes various land uses that are both permitted with and without consent. As a solar farm is not expressly listed as permitted with or without consent, it is a prohibited land use under a strict reading of the LEP. However, the LEP expressly references the *State Environmental Planning Policy (Infrastructure) 2007* (Infrastructure SEPP) and acknowledges that electricity generating works are regulated by the Infrastructure SEPP, rather than the LEP.

Under the Infrastructure SEPP, electricity works are permissible on any land in a prescribed rural, industrial or special use zone. The project is wholly encompassed by land zoned RU1 Primary Production which is a rural zone pursuant to the Infrastructure SEPP. Consequently, the project is permissible with consent.

3.4 Integrated and Other approvals

Under Section 4.41 of the EP&A Act, a number of other approvals are integrated into the State significant development approval process, and therefore are not required to be separately obtained for the proposal.

Under Section 4.42 of the EP&A Act, a number of further approvals are required, but must be substantially consistent with any development consent for the proposal (e.g. approvals for any works under the *Roads Act 1993*).

Under Clause 86 of the ISEPP the development application that involves ground works within, below or above the rail corridor (for the transmission line) must obtain the concurrence from the rail authority for the rail corridor to which the development application relates. This matter is further discussed in **section 4.5**.

The Department has consulted with the relevant government agencies responsible for the integrated and other approvals, considered their advice in its assessment of the project.

The EIS did not identify any significant impacts on matters of national environmental significance listed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and consequently ib vogt considered the project did not require approval from the Commonwealth Minister for the Environment and Energy under the EPBC Act.

3.5 Mandatory Matters for Consideration

Section 4.15 of the EP&A Act outlines the matters that a consent authority must take into consideration when determining development applications. These matters are summarised as:

- the provisions of environmental planning instruments (including draft instruments), development control plans, planning agreements, and the EP&A Regulations;
- the environmental, social and economic impacts of the development;
- the suitability of the site;
- any submissions; and
- the public interest, including the objects in the EP&A Act and the encouragement of ecologically sustainable development (ESD).

The Department has considered all these matters in its assessment of the project, as well as ib vogt's consideration of environmental planning instruments in its EIS, as summarised in **section 5** of this report. The Department considers that the project is consistent with the relevant provisions of the environmental planning instruments, including the relevant State Environmental Planning Policies and Leeton LEP, as discussed in **Appendix H**.

4 Engagement

4.1 Department's engagement

The Department publicly exhibited the EIS from 24 April 2019 until 22 May 2019, advertised the exhibition in the *Leeton Irrigator*, and notified adjoining landowners adjacent to the project boundary.

The Department consulted with Council and the relevant government agencies throughout the assessment. The Department also inspected the site on two occasions on 9 and 26 September 2019 and visited surrounding landowners (including R3 and R7) to further understand their concerns.

The Department notified and sought comment from TransGrid and Transport for NSW (TfNSW and former Roads and Maritime Services) in accordance with the Infrastructure SEPP and this is discussed further in **section 4.5** of this report.

4.2 ib vogt's Engagement

ib vogt undertook engagement with the local community as detailed in the EIS, including an online feedback form and a dedicated email address available on the project website, community open days and individual meetings with adjacent landowners. The information about the proposal was made available via a project newsletter and its website. ib vogt also undertook consultation with the Department and relevant government agencies during the assessment process.

4.3 Submissions and Submissions Report

During the exhibition of the EIS, the Department received advice from 11 government agencies, including Leeton Shire Council. Seven submissions were received from the general public (five objecting and two supporting the project) and two submissions were received from special interest groups (one in support and one providing comments).

Full copies of the agency advice and public submissions are attached in **Appendix C**.

ib vogt provided a response to all matters raised in submissions on the project (see **Appendix D**).

4.4 Amended Application

Following consideration of submissions on the project, ib vogt amended its application on two occasions in September 2019 and June 2020 as detailed in the Amendment Reports (see **Appendix E**).

The amended application includes:

- reducing the extent of the northern array area to increase the separation distance between the development footprint and neighbouring residence R7 to the north from 30 m to approximately 160 m;
- removing southwestern portion from the project site (approximately 21 ha) and increasing the separation distances between R2 (from 110 m to 650 m) and R3 (from 130 m to 750 m);
- relocating the site access point off Research Road west of the originally proposed location to allow adequate sight distance for the crossing of Research Road over the Gogeldrie Branch Canal east of the site access;
- decreasing number of inverter stations and battery units from 17 back to 14;
- providing additional landscaping along Toorak Road; and
- subdivision for the project's substation.

The Department provided the Amendment Reports to government agencies for review and comment and made them available on the Department's website. As the project amendments would reduce the impacts of the project as a whole the Department did not exhibit the Amendment Reports. The amendments to the project are summarised in **Table 3**.

Table 3 | Amendments to the project during the assessment process

Project Aspect	EIS (April 2019)	Amendment Report (September 2019)	Final Proposed Project Amendment Report (June 2020)
Project area (ha)	210	210	180 (14% reduction)
Development footprint (ha)	183	173	152 (31 ha / 17% reduction)
Solar Panels	205,000	205,000	170,000 (17% reduction)
Number of Inverter Stations and Battery Units	14	17	14
Site entry	Four site accesses points: <ul style="list-style-type: none"> three off Toorak Road (one to access northern portion, one to access central portion and one to access western portion of the development footprint); one off Research Road to access southern portion of the footprint. 	Four site accesses points: <ul style="list-style-type: none"> three off Toorak Road are in the same locations; one off Research Road has been relocated west of the originally proposed location. 	Three site access points: <ul style="list-style-type: none"> two off Toorak Road (one to access western portion of the development footprint has been removed); one off Research Road.
Distances to the nearest receivers	R7 (north) – 30 m R2 (southwest) – 110 m R3 (southwest) – 130 m R4 (west) – 110 m R5 (west) – 140 m	R7 (north) – 160 m R2 (southwest) -110 m R3 (southwest) – 130 m R4 (west) – 110 m R5 (west) – 140 m	R7 (north) – 160 m R2 (southwest) – 650 m R3 (southwest) – 750 m R4 (west) – 110 m R5 (west) – 140 m
Vegetation screening	10 m wide everywhere except near R7 (20 m wide)	<ul style="list-style-type: none"> 20 m wide screening along Toorak Road to mitigate the visual impacts for R4 and R5; 20 m wide screening along the southwestern boundary of the site to mitigate the visual impacts for R2 and R3. 	<ul style="list-style-type: none"> 20 m wide screening to mitigate the visual impacts for R2 and R3 is no longer needed; Other screening as proposed by AR (September 2019).
Subdivision	NA	Lot 146 DP 751745 proposed to be subdivided into 2 lots: <ul style="list-style-type: none"> 0.38 ha for internal switching station to be managed by TransGrid; residual 19.93 ha for solar farm. 	Subdivision as described by AR (September 2019)

4.5 Key Issues – Government Agencies

Leeton Shire Council initially objected to the project, expressing concern about the loss of prime agricultural land in an area with highly developed services and irrigation infrastructure. Additionally, Council considered that the economic assessment in the EIS overstated the economic benefits of the proposed development and understates the economic benefits of the existing agricultural use.

Council requested that a revised socio-economic assessment including a land use comparison of irrigated agriculture versus the proposed solar farm over the expected operational life of the solar farm; and a comparison of establishment costs for locating the solar farm on the proposed site versus the nearest broadacre cropping land.

Council also requested information about the potential loss of Murrumbidgee Irrigation infrastructure and upstream / downstream impacts on surrounding users of Murrumbidgee Irrigation water and infrastructure.

Following the receipt of Submissions Report, Amendment Reports and additional information from ib vogt, Council revised its position in the context of changed economic circumstances to conditionally support the project if the development consent limited operation of the project to 30 years and ib vogt enters into a voluntary planning agreement with Council including contributions and rehabilitation of the land at the end of 30 years. ib vogt has agreed to these conditions and this is further discussed in **section 5**.

DPI – Agriculture noted that the site is proposed on an irrigated cropping landscape which is a scarce and valuable resource in NSW and advised that this land should continue to be available for agriculture. DPI – Agriculture recommended that, if approved, all below ground infrastructure and cabling be removed to ensure the land can be returned to pre-project status, specifically irrigated agricultural uses, following decommissioning and rehabilitation of the project.

The **Department's Water Group** (DPIE Water) requested confirmation of reliable groundwater sources that can meet construction and operational water demands and made a number of recommendations about matters relating to flooding and erosion and sediment control.

The **Department's Crown Lands Group** (DPIE Crown Lands) noted that Toorak Road is a shared Council / Crown Road. However, under the *Roads Act 1993* Council is the dedicated road authority for any works on this road.

The **Department's Biodiversity and Conservation Division** (BCD) (formerly Office of Environment and Heritage) confirmed that the EIS for the project met the SEARs requirements for biodiversity assessment. The BCD also recommended additional measures to mitigate potential impacts from heavy machinery on Aboriginal cultural heritage along the transmission route alignment. These issues are discussed in **section 5.2**.

Transport for NSW (TfNSW) / **John Holland Rail** (including former Roads and Maritime Services) requested additional information about the location of project infrastructure in relation to the adjacent rail corridor and potential impacts to the existing rail infrastructure during construction and decommissioning. It also requested further assessment of the potential impacts of project traffic on level crossings, including the two passive level crossings at McQuillan Road and Irrigation Way and one active level crossing at Poplar Avenue. ib vogt has addressed these matters in the Submissions Report and TfNSW confirmed it has no residual concerns. TfNSW recommended that ib vogt prepare a comprehensive Traffic Management Plan in consultation with Council and RMS and ensure that the project does not cause glint and glare to the travelling public on the public road network. These recommendations are discussed in **section 5.2**. TfNSW confirmed that it has no further comments.

The **Rural Fire Service** (RFS) and **Fire & Rescue NSW** recommended requirements related to bushfire and hazard preparation and management, which is discussed in **section 5.2**.

The **Division of Resources and Geoscience** (DRG) advised that mining and exploration land uses were adequately addressed in the EIS and confirmed it is satisfied that the project would not sterilise any mineral resources.

The **Environment Protection Authority, Heritage Council of NSW** and **TransGrid** raised no concerns on the project and made no recommendations.

4.6 Key Issues – Community

Of the seven submissions received from the public, five objected and two supported the project.

Of the five objections, four were received from the residents located within 3 km of the site (including the adjoining neighbours R7 and R3) and one objection came from residents located approximately 25 km away.

The key matters raised in the objections related to:

- land use compatibility, particularly the use of irrigated land and lands with land and soil capability class 3;
- decommissioning of the project at the end of the project life; and
- visual impacts.

Concerns were also raised regarding the amenity impacts during construction, including increased traffic on local roads, noise and vibration and dust, as well as reduction in land values and insufficient benefits for the local community.

The supporting submissions stated that the project would assist both NSW and Australian government to reduce reliance on fossil fuels for electricity production.

Section 5 of this report provides a summary of the Department's consideration of these matters.

4.7 Special Interest Group Submissions

The Department received two submissions from special interest groups, one in support and one providing comments.

Murrumbidgee Irrigation (MI) raised concerns about potential impacts on infrastructure and water quality in the drainage system from contaminated run-off. It also advised that the project should be constructed in line with the Murrumbidgee Irrigation Development Rules and Drainage Rules. MI is committed to comply with the rules and not impact Murrumbidgee Irrigation infrastructure. Murrumbidgee Irrigation did not express any concerns about the project being located within the scheme.

The **Ryde Gladesville Climate Change Action Group** provided support for Yanco Solar Farm stating that the project would contribute in reducing reliance on fossil fuels for electricity production. It also acknowledged the project's positive outcomes including the creation of local jobs and the opportunity for economic stimulus to the regional economy.

5 Assessment

The Department has undertaken a comprehensive assessment of the merits of the project. This report provides a detailed discussion of the key assessment issue, namely land use compatibility (see **section 5.1**).

The key constraints for the project are shown in **Figure 3**. The Department has also considered the full range of potential impacts associated with the project and has included a summary of its conclusions in **section 5.2**. A list of the key documents that informed the Department's assessment is provided in **Appendix A**.

5.1 Compatibility of Proposed Land Use

Provisions of the Leeton LEP

The project is zoned RU1 Primary Production under the Leeton LEP. As discussed in section 3.3 a solar farm is a prohibited land use under a strict reading of the LEP.

However, based on a broader reading of the LEP, and consideration of the objectives of the RU1 zone and other strategic documents for the region, the Department considers that there is no clear intention to prevent the development of a solar farm on the project site.

Firstly, the LEP expressly references the Infrastructure SEPP and acknowledges that electricity generating works are regulated by the Infrastructure SEPP, rather than the LEP. As discussed in **section 3.3**, a solar farm is permitted with consent on land zoned RU1 under the Infrastructure SEPP.

Secondly, the project is not inconsistent with the relevant objectives of the RU1 zone, particularly in relation to:

- encouraging diversity in primary industry enterprises and systems appropriate for the area; and
- minimising the fragmentation and alienation of resource lands.

While the Leeton Shire LGA has traditionally relied upon agriculture, the introduction of solar energy generation would contribute to greater economic diversity in the region in accordance with *The Riverina Murray Regional Plan* (DPE, 2016). The Regional Plan identifies renewable energy as one of the priority growth sectors and recognises the region has significant potential for renewable energy industries.

In addition, the development would not fragment or alienate any resource lands in the LGA, and the land could be easily returned to agricultural land following decommissioning, as the inherent agricultural capability of the land would not be affected in the long term. Further, the management and mitigation measures could be implemented for the project to ensure there would be no adverse impacts to water quality of receiving watercourses and on Murrumbidgee Irrigation infrastructure (as discussed further below).

Finally, and most importantly, Council supports the project, subject to conditions.

Potential Impacts on Agricultural Land

The project site is entirely located on irrigated land within the MIA and is predominantly Class 3 agricultural capability (97 % of the site). The site is mainly used for grapevines for wine production and orange orchards (65 % and 28 % respectively of the development footprint) and several irrigation channels throughout the site.

The Riverina Murray region makes an important contribution to irrigated agriculture production in NSW and the region has a confluence of agricultural productivity and value add manufacturing.

Initially Council expressed concern about the economic benefits claimed by ib vogt from the project including the value of current agricultural production and benefits from a construction workforce being short-term (10 months) and also noted that the operational workforce was similar for either use.

The Department notes that ib vogt has estimated that over 30 years the value of horticultural production associated with the subject site including indirect benefits would be \$213 million compared to electricity production of \$870 million.

Council commissioned an economic review by Corview which considered that ib vogt's assessment had underestimated the agricultural yield of the site and the value of agricultural production. Corview concluded that the annual value of agricultural production over the life of the project including indirect benefits would be \$352 million (compared to \$213 million proposed by ib vogt).

While there may be uncertainty on the exact value of current agricultural production the two assessments estimate it would be between \$213 million and \$352 million. The Department acknowledges that the economic benefit to including more broadly to the State from the electricity generation of the solar farm (estimated at around \$870 million) would be greater and more than double that of agricultural production.

The project would also generate both direct and indirect benefits to the local community, including:

- generating up to 120 jobs during 10 months of construction and 3 jobs during operation of the project;
- expenditure on accommodation and businesses in the local economy by workers; and
- the procurement of goods and services by ib vogt and any associated contractors.

The Department fully recognises the importance of agricultural production on irrigated land in the region and the concern expressed by Council, DPI – Agriculture and in some public submissions about the impact of the project on agricultural and irrigated land. The Department has considered the long-term impacts of the project on the site, the impact on inherent land capability, the overall use of irrigated land in the region for solar generation by this project and cumulatively with other solar projects and potential impacts on the irrigation infrastructure.

Use of agricultural land

In regard to the proposed change in land use of agricultural land, the Department has carefully considered agricultural land, irrigated cropping land and land and soil capability, potential for significant fragmentation or displacement of existing agricultural industries and any cumulative impacts of multiple developments in accordance with the considerations outlined in the Solar Guideline.

In regard to the long term impacts of project on irrigated agriculture in the region, the Department considers that the inherent agricultural capability of the land would not be affected by the project due to the relatively low scale of the development and has recommended conditions that require ib vogt to return the land to Class 3 agricultural land capability following decommissioning.

The Department has included rehabilitation objectives in the recommended conditions to maintain the productivity of the agricultural land during the construction and operation of the project and to fully reinstate the agricultural capability of the land following decommissioning of the project, including the removal of all underground cabling and project infrastructure.

The Department has also recommended strict land management conditions to control the growth of weeds, reducing the potential spread of weeds to neighbouring properties. In this regard, ib vogt would be required to restore the ground cover of the site following construction, maintain the ground cover with appropriate perennial species, manage weeds within the ground cover and maintain grazing within the development footprint where practicable.

The Department notes that the size of the site is relatively small (152 ha) and was reduced by ib vogt in the amendments to the project to allow agriculture to continue on the land excised from the development which comprises around 17 % (i.e. 31 ha) of the site. The Department considers that that the land covered by the project (as amended) represents a very small proportion (0.17 %) of irrigated land within the MIA².

Two State significant solar farm projects (i.e. Griffith Solar Farm (SSD-6604) and Riverina Solar Farm (SSD-7482)) have been approved within the MIA. Griffith Solar Farm is around 60 MW with a development footprint of 125 ha and Riverina Solar Farm is around 30 MW with a 110 ha footprint. The development footprint of Yanco Solar Farm combined with two approved SSD solar projects in the MIA (Griffith Solar Farm and Riverina Solar Farm) would result in 390 ha and would result in a small proportion overall (0.43 %) of irrigated land within the MIA.

Impacts on irrigation infrastructure

Concerns were initially raised by Council, Water Group and Murrumbidgee Irrigation about water availability for the project, potential impacts on irrigation infrastructure and potential water pollution and the impact this might have on downstream water users. Following the receipt of additional information from ib vogt all agencies have confirmed they do not have outstanding concerns, including Council and DPI – Agriculture.

The Department acknowledges that water use on irrigation farms in the Murray-Darling Basin is variable and is influenced by a range of factors including changes in seasonal conditions, water availability, and trade in water allocations and permanent water entitlements. Council's concern about the availability of water in the area and the impact of the drought in the Murray-Darling Basin were also factors that contributed to Council offering conditional support for the project.

The Department also notes that any landowner may choose not to maintain its water entitlements or utilise land for irrigated cropping regardless of whether the solar farm is approved.

The Department notes that Murrumbidgee Irrigation has not expressed any concerns about the project being located on the proposed site or its assets being stranded and its concerns are limited to potential physical impacts on infrastructure and maintaining water quality in its drainage system. In addition, ib vogt has committed to comply with Murrumbidgee Irrigation's operating rules, that the irrigation infrastructure would be retained, and that for the life of the solar farm the water delivery entitlement charges attached to the site would continue to be paid to Murrumbidgee Irrigation. Murrumbidgee Irrigation has confirmed that it has no residual concerns with the project.

Long term operation

Lastly, in response to Council concerns that the project would result in loss of prime (irrigated) agricultural land within the Leeton Shire, the Department acknowledges ib vogt's efforts to mitigate impacts to acceptable levels and that ib vogt offered to Council that it would accept a condition of consent limiting the life of the project to 30 years and offered a voluntary planning agreement.

² Based on an area of the MIA of 90,000 ha

Council offered conditional support for the project based on the development consent including a limit to the operation of the solar farm of 30 years and ib vogt entering a monetary contribution with Council requiring the solar farm being decommissioned and rehabilitated at the end of this period. ib vogt maintains that this is consistent with the operational life of large-scale solar panels (between 25 - 35 years) and is consistent with its lease for the site.

The Department considers that a condition limiting operation is not consistent with the policy approach it has adopted in standard conditions for solar energy projects which allow solar arrays to be upgraded over time.

However, to address Council's concerns, the Department has recommended a condition limiting the operation of the solar farm to 30 years. The recommended condition also includes a requirement that allows the Secretary to extend the consent, in consultation with Council in regard to the land use planning objectives applicable to the site at the time.

Summary

In summary, the Department considers that the inherent agricultural capability of the land would not be affected by the project due to the relatively low scale of the development, that the land could be returned to agricultural use following decommissioning in accordance with strict conditions with outcomes from rehabilitation.

The Department also notes that the area of the solar farm would take up a small proportion of the irrigated land in the MIA (0.17 % for Yanco Solar Farm only and 0.43 % combined with two other SSD solar projects in the MIA) and the irrigation infrastructure would not be removed or impacted.

Importantly, Council supports the project subject to the consent being limited to 30 years with an opportunity to continue the operation of the development with consideration of the land use planning objectives applicable to the site at the time. ib vogt and Council accepted this condition and the Department has included this requirement in its recommended conditions.

5.2 Other issues

In addition to the above matters, the Department has considered the full range of potential impacts associated with the project, as outlined in **Table 3**.

Table 4 | Other Issues

Findings	Recommended Conditions
Visual	
<ul style="list-style-type: none"> There are 23 non-associated residences adjacent to the site and 1.6 km within the site, with three residences located 110 m and 140 m west (R4 and R5) and 160 m north (R7) of the site. Concerns about visual impacts were raised in three objections from submitters located within 3 km from the site, including R3 and R7. The solar panels would be low lying (up to 2.2 m) and the maintenance buildings and substation (up to 6 and 5 m high respectively) would be a similar size to agricultural structures commonly found in the area. Residence R7, adjacent to the northern boundary of the project site, is located 160 m north (increased from 30 m in through amendment to the project layout). It is noted that the dominant view from this residence is to the north (i.e. away from the solar 	<ul style="list-style-type: none"> Minimise the off-site visual impacts of the development, including the potential for any glare or reflection; Ensure the visual appearance of all ancillary infrastructure (including paint colours) blends in as far as possible with the surrounding landscape.

Findings

farm). In addition, ib vogt has proposed a 10 m wide landscaping buffer along the northern boundary of the project site that would further limit the view towards the project site. The Department considers this measure is likely to be successful given capability of the land. The remaining visual impacts from this residence were assessed to be negligible.

- Residences R4 and R5 located on Toorak Road approximately 110 m and 140 m west from the project boundary. The solar panels would be visible from the gates to these properties. The landscaping directly opposite the gates would be 20 m wide and the remainder of the western boundary vegetation screening would be 10 m wide. Due to the proposed vegetation buffer and the relatively low-lying nature of the development, the Department considers the visual impacts for these properties would be low (and would be negligible post implementation of mitigation measures).
- Residences R2 and R3 are located 650 m and 750 m from the development footprint respectively following amendment of the project layout. The removed southwestern portion of the site (approximately 21 ha of the 31 ha removed from the project) would continue to be used for agricultural activities (orange orchard). The existing orange orchard would provide screening for R2 and R3, and the visual impacts at these residences would be negligible.
- Similarly, existing vegetation, the relatively low height of the infrastructure and the proposed vegetation buffer along most of the project boundaries would limit the visual impacts of the project from other residences and most viewpoints within 2 km including the subdivided lots in Leeton north-east of the project site.
- The photovoltaic panels are designed to absorb rather than reflect sunlight, and the Department considers that the project would not cause noticeable glint or glare compared to other building surfaces.
- The project is not located within 200 km from the Siding Spring Observatory, therefore does not fall inside the Dark Sky Region covered by the NSW Government's *Dark Sky Planning Guideline*.
- The Department considers the visual impacts of the project on the surrounding residences and road users would be minimal.

Recommended Conditions

- The Applicant must establish and maintain a vegetation buffer along the northern and western site boundaries to minimise views from residences R4, R5 and R7 within 3 years of commencing operations.

Biodiversity

- The site is comprised of mostly irrigated cropping land (viticulture and orchards).
- Native vegetation has been largely cleared and some planted vegetation occurs along the fence lines.
- Three plant community types (PCTs) were identified within the project site. The project layout has been designed to avoid or minimise clearing of native vegetation.
- However, the project would disturb:
 - 0.49 ha of PCT 44 Speargrass - Windmill Grass - White Top Grassland with vegetation integrity score 36.4 (in low condition). The impacts to this PCT would generate 9 offset ecosystem credits
 - 0.05 ha of PCT 26 Weeping Myall Open Woodland of the Riverina Bioregion and NSW South Western Slopes Bioregion with vegetation integrity score 86.5 (in moderate condition). PCT 26 is a threatened ecological community listed under the *Biodiversity Conservation Act 2016* (BC Act). The impacts to this PCT would generate 2 offset ecosystem credits under the BC Act.
- One threatened flora species under the BC Act, the Small Scurf Pea (*Cullen parvum*), was unable to be surveyed and was

- Retire required offset species in accordance with the *NSW Biodiversity Offsets Scheme* for Major Projects.
- Prepare a Biodiversity Management Plan in consultation with BCD.

Findings

Recommended Conditions

assumed to be present on site. This generated 11 species credits due to the loss of suitable habitat features.

- In summary, the impacts on native vegetation and native species would generate 11 ecosystem credits and 11 species credits under the BC Act. These credits would need to be retired in accordance with the *NSW Biodiversity Offset Scheme*.
- While Leeton Shire Council is listed under *SEPP No. 44 – Koala Habitat Protection* (SEPP 44), ib vogt's assessment concluded that the potential koala habitat proposed to be cleared within the site (i.e. 0.05 ha of PCT 26 Weeping Myall Open Woodland) is not considered important Koala habitat and is of low quality due to being largely cleared and highly disturbed. As such, the proposal is unlikely to reduce the area of occupancy of an important population of Koala.
- BCD and the Department are satisfied that the impact to biodiversity could be addressed through imposing suitable conditions of consent.

Traffic and Transport

Site access points

- The application includes 3 potential access points:
 - 2 off Toorak Road (one to access northern portion and one to access central portion of the development footprint); and
 - 1 off Research Road to access southern portion of the footprint.
- In response to Council's comments, ib vogt relocated the site access off Research Road slightly west of the originally proposed location to allow adequate sight distance between the crossing of Research Road over the Gogeldrie Branch Canal.
- The site access points off Toorak Road and Research Road would be upgraded to rural property access type.
- Over-dimensional and heavy vehicles associated with the construction of the transmission line only may also use Houghton Road.

Traffic volumes

- Construction traffic volumes would vary during 10-month construction period but the peak daily vehicle movements would not exceed:
 - 36 heavy vehicle movements per day; and
 - 10 light vehicle movements per day.
- Additionally, 2 over-dimensional vehicles would be required during construction.
- As construction activities would be restricted to daytime hours, construction related vehicles would only be using the road network during the day.
- During operation of the project 2 vehicle movements per day would be generated.

Road upgrades

- ib vogt did not propose any road upgrades along the traffic route. Council agreed that this would not be required.

Rail corridor

- The transmission line would cross a non-operational rail corridor owned by TfNSW and run parallel to Houghton Road (on the northern side) within 25 m of the rail corridor before connecting to TransGrid's substation. The proposed power line would either be overhead or underground (0.8 m deep).
- TfNSW initially recommended a number of conditions to be included in consent for works in the vicinity to the rail corridor owned by TfNSW. In its Submissions Report, ib vogt proposed to enter into a licence agreement with TfNSW for any works within the rail corridor. The Department considers that the conditions

- Prepare a Traffic Management Plan in consultation with TfNSW and Council.
- The development must not generate more than 36 heavy vehicle movements and 10 light vehicle movements per day during construction, upgrading and decommissioning.

Findings	Recommended Conditions
<p>proposed by TfNSW should be included in the licence agreement and not in the standard conditions for SSD solar project. TfNSW confirmed that it has no outstanding issues.</p>	
<p>Heritage</p> <ul style="list-style-type: none"> No items of historic heritage have been identified on or in close proximity to the development footprint. Site surveys for Aboriginal cultural heritage identified one isolated find (YSF_IF_001) along the transmission route. ib vogt has committed to avoiding any impacts on this heritage item. BCD advised that a 5 m buffer should be installed around the item to prevent harm. The Department and BCD consider that the project would not significantly impact the heritage values of the locality. 	<ul style="list-style-type: none"> Ensure the development does not cause any direct or indirect impacts on isolated find YSF_IF_001 located outside the approved development footprint. Cease works and notify the NSW Police and BCD if human remains are identified over the life of the project. Prepare and implement procedures for unexpected finds of heritage items.
<p>Hazards</p> <ul style="list-style-type: none"> The project would comply with the International Commission on Non-Ionizing Radiation Protection (ICNIRP) guidelines for electric, magnetic and electromagnetic fields. The site is not mapped as bushfire prone land. Notwithstanding, ib vogt has committed to maintaining the entire site as an Asset Protection Zone and preparing an Emergency Plan to manage fire risk. ib vogt intends to manage ground cover and its associated fire hazard on site by using managed stock grazing during operation. The Department is satisfied that the bushfire risks can be suitably controlled through the implementation of standard fire management procedures and recommendations made by the RFS and FRNSW, including: <ul style="list-style-type: none"> managing the site as an Asset Protection Zone (APZ), including a defendable space of at least 10 m around the perimeter of the solar array areas and around the buildings, switching station and battery storage units; a 20,000 litre water supply tank, fitted with a 65 mm Storz fitting and a FRNSW compatible suction connection, located adjacent to the internal access road; and the development and implementation of a comprehensive Emergency Response Plan. The site is not mapped as flood prone under the LEP and the undulating topography allows surface water to drain from the site without ponding or causing flooding. Further, DPIE Water, BCD and Council raised no concerns about flooding. 	<ul style="list-style-type: none"> The development must comply with the relevant requirements in the RFS's <i>Planning for Bushfire Protection 2019</i> (or equivalent) and Standards for Asset Protection Zones. Defendable space and solar arrays are to be managed as an APZ and the development is suitable equipped to respond to fires including water supply tank and appropriate connections. Prepare and implement an Emergency Plan in consultation with RFS and FRNSW.
<p>Decommissioning and Rehabilitation</p> <ul style="list-style-type: none"> The majority of community submissions raised concerns about decommissioning, rehabilitation and the use of the land after its operational life. The Department has developed standard conditions for solar farms that would cover this stage of the project life cycle, including clear decommissioning triggers and rehabilitation objectives such as removing all above and below ground infrastructure and restoring land capability to its pre-existing agricultural use (i.e. at least Class 3 Land Capability). With the implementation of these measures, the Department considers that the solar farm could be suitably decommissioned at the end of the project life, or within 18 months of cessation of operations and that the site be would appropriately rehabilitated. 	<ul style="list-style-type: none"> Include rehabilitation objectives requiring the site to be rehabilitated within 18 months of cessation of operations. Cease operations within 30 years of commencement of operations, unless otherwise agreed with the Secretary, in consultation with Council.

Findings	Recommended Conditions
<p>Water Resources</p> <ul style="list-style-type: none"> • The project would require 38 megalitres (ML) of water during construction (mainly for dust suppression but also for cleaning, concreting, on-site amenities and landscaping) pumped directly from the existing groundwater bore (WAL number 11905 with an annual allocation of 100 ML and located on site) and 0.9 ML of potable water that would transport to the site as bottled water. • Approximately 54 kilolitres (kL) of water per year would be required during operation and sourced from the existing domestic bore (WAL number 11905). Water would be used for staff amenities at the control and maintenance building and for panel cleaning. • DPI Water Group had no outstanding concerns about water supply. 	<ul style="list-style-type: none"> • Prohibit water pollution in accordance with Section 120 of the <i>Protection of the Environment Operations Act 1997</i>. • Undertake activities in accordance with <i>Managing Urban Stormwater: Soils and Construction</i> (Landcom, 2004) manual and <i>Guidelines for Controlled Activities on Waterfront Land</i> (DPI Water, 2018). • The Applicant must ensure that it has sufficient water for all stages of the development, and if necessary, adjust the scale of the development to match its available water supply. • Ensure the solar panels and ancillary infrastructure (including security fencing) are designed, constructed and maintained to reduce impacts on surface water, flooding and groundwater at the site.
<p>Voluntary Planning Agreement</p> <ul style="list-style-type: none"> • ib vogt and Leeton Shire Council have agreed to enter into a Voluntary Planning Agreement (VPA) for the project. • The terms of the VPA include ib vogt providing development contributions of \$900,000 equivalent to 0.1 % of the capital investment of the project to be paid to Leeton Shire Council in agreed annual instalments for 30 years from the commencement of operation. The money would preferably be used to fund community enhancement and road maintenance projects in the locality. • The project is unlikely to result in significant demand on community services and infrastructure (excluding roads) given the relatively low level of local employment generated once it is operational. • The funding would be administered via a VPA established under Section 7.4 of the EP&A Act. • Noting the above, the Department considers that the project would provide economic benefits for the local community. Council has confirmed it has no outstanding issues. 	<ul style="list-style-type: none"> • ib vogt must enter into a VPA with Leeton Shire Council, in accordance with: <ul style="list-style-type: none"> • Division 7.1 of Part 7 of the EP&A Act; and • the terms of the offer from the ib vogt.
<p>Workforce accommodation</p> <ul style="list-style-type: none"> • Up to 120 workers would be required during the construction period and would be sourced from the local community where possible. • There is the potential for construction of the project to overlap with the construction of Darlington Point Solar Farm (currently under construction) and the approved: Yarrabee Solar Farm, Riverina Solar Farm, Avonlie Solar Farm and Sandigo Solar Farm. However, the Department considers that it is unlikely the entire construction periods of all these projects would overlap, and notes that the construction of Yarrabee Solar Farm may be staged. • In addition to the nearby towns of Leeton and Narrandera the regional centres of Griffith and Wagga Wagga (between 30 and 100 km from the site) would provide a source of workers and accommodation options. 	<ul style="list-style-type: none"> • No specific conditions proposed.

Findings	Recommended Conditions
<ul style="list-style-type: none"> • Council has raised no concerns about this matter. The Department considers there would be sufficient accommodation available for the project and the potential cumulative impacts associated with multiple projects in the region. 	
Land Values	
<ul style="list-style-type: none"> • A number of submissions raised concerns that the project would have an adverse impact on neighbouring land values, particularly as a result of the proximity of the proposed solar farm. • The Department notes that: <ul style="list-style-type: none"> – property values are influenced by a number of factors; – there is no clear evidence to suggest that solar farms in NSW are adversely affecting property values; – the project is permissible with development consent under the Infrastructure SEPP; – a detailed assessment of the merits of the project has found that the project is unlikely to generate any significant economic, environmental or social impacts; – the impacts of the project can be further minimised by imposing suitable conditions on the project, and requiring a range of standard mitigation measures, such as vegetation screening, to be implemented; and – the Department considers the visual impacts of the project on the surrounding residences and road users would be minimal. • Accordingly, the Department considers the project would not result in any significant or widespread reduction in land values in the areas surrounding the solar farm. 	<ul style="list-style-type: none"> • No specific conditions required
Subdivision	
<ul style="list-style-type: none"> • ib vogt is proposing to subdivide Lot 146 DP 751745 to facilitate development of the project substation. • However, the proposed lot for the substation would be under the minimum lot size of 150 ha (0.38 ha) and is prohibited under a strict reading of the Leeton LEP. • Notwithstanding, under Section 4.38(3) of the EP&A Act, development consent for the project as a whole can be granted despite the subdivision component of the application being prohibited by the LEP. • The Department is satisfied that the subdivision should be approved as: <ul style="list-style-type: none"> – it would not result in the addition of any dwelling entitlements on the subdivided lots; and – it is consistent with key objectives of the RU1 zone as it would encourage diversity in primary industry enterprises and minimise conflict between land uses. • Further, Council has not objected to the proposed subdivision. 	<ul style="list-style-type: none"> • Subdivide the proposed lot in accordance with requirements of clause 157 of the <i>Environmental Planning and Assessment Regulation 2000</i>.

6 Recommended Conditions

The Department has prepared recommended conditions of consent for the project (see **Appendix I**).

The Department consulted with ib vogt and the relevant agencies on the conditions for the project.

These conditions are required to:

- prevent, minimise, and/or offset adverse impacts of the project;
- ensure standards and performance measures for acceptable environmental performance;
- ensure regular monitoring and reporting; and
- provide for the ongoing environmental management of the project.

The recommended conditions use a risk-based approach that focuses on performance-based outcomes. This reflects current government policy and the fact that solar farms require relatively limited ongoing environmental management once the project has commenced operations.

In line with this approach, the Department has recommended operating conditions to minimise traffic, amenity, water, flooding and bushfire impacts, and has required the following management plans be prepared and implemented:

- Traffic Management Plan;
- Biodiversity Management Plan; and
- Emergency Plan.

The recommended conditions also require ib vogt to provide detailed final layout plans to the Department prior to construction.

The Department has recommended a condition limiting the operation of the solar farm to 30 years. The condition allows the operation of the project to be extend beyond 30 years with the agreement of the Secretary following consultation with Council in regard to the land use planning objectives applicable to the site at the time.

The Department acknowledges that ib vogt has offered to enter into a voluntary planning agreement with Council, which would provide approximately \$900,000 for community enhancement projects in the local area. The Department included this in conditions.

Other key recommended conditions include:

- *decommissioning* – returning the land to Class 3 agricultural land capability following decommissioning of the project, including the removal of all underground cabling and project infrastructure.
- *visual* – minimising the off-site visual and lighting impacts of the project, including the potential for any glare or reflection, and ensuring the visual appearance of all ancillary infrastructure (including paint colours) blends in as far as possible with the surrounding landscape;
- *fire* - ensure that the development complies with the relevant asset protection requirements in the RFS's *Planning for Bushfire Protection 2019* (or equivalent); and
- *biodiversity offsets* – retiring biodiversity offset credits in accordance with the NSW Biodiversity Offsets Scheme;
- *operating hours* – undertaking construction, upgrading or decommissioning activities on-site during standard construction hours, unless these activities that are inaudible at non-associated receivers.

7 Evaluation

The Department has assessed the development application, EIS, submissions, Submissions Report, amended development application and additional information provided by ib vogt and advice received from relevant government agencies. The Department has also considered the objectives and relevant considerations under Section 4.15 of the EP&A Act.

The project site (180 ha) is located on irrigated agricultural land within the Murrumbidgee Irrigation Area (MIA). The soils within the site are mostly (97 %) Class 3 under the *Land and Soil Capability Mapping in NSW* (OEH, 2017), meaning that the land is suited to grazing, but capable of sustaining cultivation on a rotational basis with the remainder soils being Class 6 and do not include any mapped Biophysical Strategic Agricultural Land (BSAL). The site is currently used for irrigated agriculture (growing grapevines and orange groves).

The Department recognises the importance of agricultural production on irrigated land in the region and considers that the land could be easily returned to agricultural land following decommissioning and the inherent agricultural capability of the land would not be affected by the project due to the relatively low scale of the development (i.e. the development footprint is 152 ha). Further, the Department notes that ib vogt has committed to not impacting Murrumbidgee Irrigation infrastructure and continuing to pay the water entitlement charges attached to the site.

The loss of 152 ha of irrigated agricultural land combined with two the other approved SSD solar farms in the MIA (Griffith Solar Farm and Riverina Solar Farm) would result in 390 ha, which represents a small fraction (i.e. 0.43 %) of irrigated land and the Murrumbidgee Irrigation Authority has not raised any concerns about the impacts of the project on the irrigation scheme.

In response to Council's concerns about loss of prime (irrigated) agricultural land within the Leeton Shire, ib vogt offered to accept a condition of consent limiting the life of the project to 30 years and to enter into a voluntary planning agreement with Council for \$900,000.

The Department has recommended the condition limiting the operation of the solar farm to 30 years which allows the Secretary to extend the consent, in consultation with Council in regard to the land use planning objectives applicable to the site at the time.

Both the Department and Council consider a solar farm development to be a suitable land use for the site. The project would not result in any significant reduction in the overall agricultural productivity of the region. Additionally, ib vogt would manage ground cover within the site, and the site could be returned to agricultural uses after the project is decommissioned, ensuring that the inherent agricultural capability of the land would not be affected in the longer term. Finally, the Department acknowledges that there would be broader economic benefit to the State from the electricity generation of the solar farm that is greater than the agricultural production.

The Department acknowledges that ib vogt amended the project to provide increased setbacks from the nearest residences in addition to the vegetation screening along most of the site boundaries. These amendments, have materially reduced the potential visual impacts on the landscape and surrounding residences have been reduced.

To address the residual impacts of the project, the Department has recommended a range of detailed conditions, developed in conjunction with agencies and Council, to ensure these impacts are effectively minimised, managed and/or offset. ib vogt has reviewed the conditions and does not object to them.

Importantly, the project would assist in transitioning the electricity sector from coal and gas-fired power stations to low emissions sources. It would generate approximately 132,500 MWh of clean electricity annually, which is enough to power over 22,500 homes and save over 127,000 tonnes of greenhouse gas emissions per year. The project is therefore consistent with the goals of the NSW's *Climate Change Policy Framework* and *the Net Zero Plan Stage 1: 2020 – 2030*.

Further, the project includes an energy storage facility, with a capacity of 81 MW / 57 MWh, that would enable the project to store solar energy for dispatch to the grid outside of daylight hours and / or during periods of peak demand, which has the potential to contribute to increased grid stability and energy security.

The Department considers that the project achieves an appropriate balance between maximising the efficiency of the solar resource development and minimising the potential impacts on surrounding land users and the environment. The project would also stimulate economic investment in renewable energy and provide flow-on benefits to the local community through job creation, voluntary planning agreement and capital investment.

On balance, the Department considers that the project is in the public interest and should be approved, subject to the recommended conditions of consent (see **Appendix I**).

8 Recommendation

It is recommended that the Executive Director, Energy, Resources and Compliance:

- **considers** the findings and recommendations of this report;
- **accepts and adopts** all of the findings and recommendations in this report as the reasons for making the decision to grant consent to the application;
- **agrees** with the key reasons for approval listed in the notice of decision;
- **grants consent** to the application in respect of the Yanco Solar Farm (SSD 9515); and
- **signs** the attached development consent and recommended conditions of consent (see Appendix I).

Recommended by:



14/7/20

Tatsiana Banduruk
Environmental Assessment Officer
Energy Assessments



14/7/20

Iwan Davies
Team Leader
Energy Assessments



14/7/20

Nicole Brewer
Director
Energy Assessments

9 Determination

The recommendation is **Adopted** / ~~Not adopted~~ by:



16 July 2020

Mike Young

Executive Director

Energy, Resources and Compliance

Appendices

Appendix A – List of referenced documents

Yanco Solar Farm Environmental Impact Assessment, NGH Environmental, 9 April 2019

Yanco Solar Farm Response to Submissions, NGH Environmental, 5 September 2019

Yanco Solar Farm Amendment Reports, NGH Environmental, 4 September 2019 and 23 June 2020

Email from Leeton Shire Council confirming its position to object to the project, dated 14 October 2019.

Letter from ib vogt to Leeton Shire Council outlining new commitments on the project, dated 22 November 2019.

Letter from Leeton Shire Council conditionally supporting the project, dated 22 January 2020.

Letter from ib vogt to the Department outlining the benefits of the project, dated 11 March 2020.

Note: all documents are available on the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/9391>

Appendix B – Environmental Impact Statement

See the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/9391>

Appendix C – Submissions

See the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/9391>

Appendix D – Submissions Report

See the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/9391>

Appendix E – Amendment Reports

See the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/9391>

Appendix F – Additional Information provided by Leeton Shire Council

See the Department's website at: <https://www.planningportal.nsw.gov.au/major-projects/submission/367416>

Appendix G – Additional Information provided by ib vogt

See the Department's website at: <https://www.planningportal.nsw.gov.au/major-projects/project/9391>

Appendix H – Statutory Considerations

In line with the requirements of Section 4.15 of the EP&A Act, the Department's assessment of the project has given detailed consideration to a number of statutory requirements. These include:

- the objects found in Section 1.3 of the EP&A Act; and
- the matters listed under Section 4.15(1) of the EP&A Act, including applicable environmental planning instruments and regulations.

The Department has considered all of these matters in its assessment of the project and has provided a summary of this assessment below.

Aspect	Summary
Objects of the EP&A Act	<p>The objects of most relevance to the Minister's decision on whether to approve the project are found in Section 1.3(a), (b), (c), (e) and (f) of the EP&A Act.</p> <p>The Department considers the project encourages the proper development of natural resources (Object 1.3(a)) and the promotion of orderly and economic use of land (Object 1.3(c)), particularly as the project:</p> <ul style="list-style-type: none">• includes approximately 170,000 single-axis tracking solar panels (up to 2.2 m high), 14 inverter stations and battery storage units (up to 3 m high), internal switching station with control room (up to 5 m high) and maintenance and storage buildings (up to 6 m high);• is a permissible land use on the subject land;• is located in a suitable location for efficient solar energy development;• is able to be managed such that the impacts of the project could be adequately minimised, managed, or at least compensated for, to an acceptable standard;• would generate up to 120 construction jobs and 3 full time equivalent jobs;• would contribute to a more diverse local industry, thereby supporting the local economy and community;• would not fragment or alienate resource lands in the LGA; and• is consistent with the goals of the NSW's <i>Climate Change Policy Framework</i> and the <i>Net Zero Plan Stage 1: 2020 – 2030</i> and would assist in meeting Australia's renewable energy targets whilst reducing greenhouse gas emissions. <p>The Department has considered the encouragement of ESD (Object 1.3 (b)) in its assessment of the project. This assessment integrates all significant socio-economic and environmental considerations and seeks to avoid any potential serious or irreversible environmental damage, based on an assessment of risk-weighted consequences.</p> <p>In addition, the Department considers that appropriately designed SSD solar development, in itself, is consistent with many of the principles of ESD. The Department has also considered the project against the principles of ESD. Following its consideration, the Department considers that the project can be carried out in a manner that is consistent with the principles of ESD.</p> <p>Consideration of environmental protection (Object 1.3(e)) is provided in section 5.2 of this report. Following its consideration, the Department considers that the project could be undertaken in a manner that would at least maintain the biodiversity values of the locality over the medium to long term and would not significantly impact threatened species and ecological communities of the locality. Both BCD and the Department are satisfied that any residual biodiversity impacts could be managed and/or mitigated by imposing appropriate conditions and retiring the required biodiversity offset credits.</p> <p>Consideration of the sustainable management of built and cultural heritage (Object 1.3(f)) is also provided in section 5.2 of this report. Following its consideration, the Department considers the project would not significantly impact the built or cultural heritage of the locality. The Department is satisfied that any residual impacts on heritage can be managed and/or mitigated by imposing appropriate conditions.</p>

Aspect	Summary
State Significant Development	Under Section 4.36 of the EP&A Act the project is considered a State Significant Development. The Independent Planning Commission is the consent authority for the development as Council objected during the exhibition of the EIS. Under the delegation of the Chairperson of the Commission of 12 March 2020, the Executive Director, Energy, Resources and Compliance, may determine the project.
Environmental Planning Instruments	<p>The <i>Leeton Shire Local Environmental Plan 2014</i> (Leeton LEP) applies and is discussed in section 2.1 and 3.3 of this report, particularly regarding permissibility and land use zoning. The Project is permissible under the Infrastructure SEPP. In accordance with the Infrastructure SEPP, the Department has given written notice of the project to TransGrid, Essential Energy and TfNSW.</p> <p>ib vogt completed a preliminary risk screening and preliminary hazard analysis in accordance with <i>SEPP No. 33 – Hazardous and Offensive Development</i>. The Department's consideration of this analysis is discussed in section 5.2</p> <p>The Department has considered the provisions of the <i>SEPP (Primary Production and Rural Development) 2019</i>. Of relevance to the project, the SEPP aims to facilitate the orderly economic use and development of lands for primary production, to reduce land use conflict and sterilisation of rural land and to identify State significant agricultural land. While the location of State significant agricultural land has not been finalised, the Department has considered all of these matters in section 5.1 of this report.</p> <p>The Department has considered the provisions of <i>SEPP No. 55 – Remediation of Land</i>. A preliminary assessment of the land found no contaminated land within the project site, and the Department is satisfied the site is suitable for the development.</p> <p>Leeton Shire Council is listed under <i>SEPP No. 44 – Koala Habitat Protection (SEPP 44)</i>. ib Vogt's assessment concluded that the vegetation within the site is not considered potential Koala habitat, and the Department has considered this in section 5.2 of this report.</p>

Appendix I – Recommended Conditions of Consent

See the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/9391>